**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**WASHINGTON, DC 20460**

OFFICE OF
CHEMICAL SAFETY
AND POLLUTION
PREVENTION

June 17, 2013

**MEMORANDUM**

**Subject:** Review for 89101-R

**From:** Chris Jiang, Chemist
Chemistry and Toxicology Team
Product Science Branch
Antimicrobials Division (7510P)

Chris Jiang
6/17/13

**Thru:** Karen P. Hicks, CT Team Leader
Chemistry and Toxicology Team
Product Science Branch
Antimicrobials Division (7510P)

**To:** Marshall Swindell PM 33/Karen Leavy
Regulatory Management Branch I
Antimicrobials Division (7510P)

**Applicant:** Reintjes Marine Surface Technologies, LLC

**Formulation from Label**

| Active Ingredient(s) | % by wt. |
|---|---|
| Cuprous oxide* | 56.500 |
| Zinc | 0.054 |
| Silver | 0.018 |
| Other Ingredients | 43.428 |
| Total | 100.000 |

*Metallic copper equivalent....50%

**BACKGROUND:**

The registrant has submitted a product chemistry package for a new antifoulant powder that is produced through a non-integrated process. The package includes a label, Confidential Statements of Formula for the basic formulation and an alternate formulation 1, a data matrix, and product chemistry requirements that are identified by the Agency as MRIDs 48772004, 48772005, 48772006, and 48772007.

**FINDINGS:**

1. The concentrations of the active ingredients on the Confidential Statement of Formula (CSFs dated June 17, 2013 for the basic formulation and alternate formulation 1) are consistent with the label declaration. These CSFs supersede all previous CSFs for the respective formulations.

2. All ingredients are approved for non-food use in pesticidal products.

3. The product identity and composition is **acceptable**.

4. The description of the starting materials is **acceptable**

6. The description of the formulation process is **acceptable**.

7. The discussion of the formation of impurities is **acceptable**.

8. The certified limits are based on EPA standard certified limits and are **acceptable**.

9. The preliminary analysis is **acceptable**. The reason that zinc was found at a higher percentage is that zinc compounds are in the formulation as inert compounds.

10. The enforcement analytical methods are **acceptable**.

11. The color, physical state, and odor are **acceptable** as the product is an odorless dull purple powder at 25 °C.

12. The density is **acceptable** as the average bulk density was determined to be 0.970 g/mL.

13. The pH is **acceptable** as the average pH of a 1% dilution of the product was determined to be 7.31 at 25 °C.

14. The oxidation/reduction potential is **acceptable**. No reaction was observed when the product was mixed with water, zinc, ammonium dihydrogen phosphate, potassium permanganate, and turpentine.

15. The flammability is **acceptable** as the product does not contain any combustible liquids.

16. The explodability is **acceptable** as the product is not potentially explosive.

17. A joint study for storage stability and corrosion characteristics is ongoing.

18. The viscosity is **acceptable** as the product is a solid.

19. The miscibility is **acceptable** as the product is not an emulsifiable liquid that will be diluted with petroleum solvents.

20. The dielectric breakdown voltage is **acceptable** as the product is not for use around electrical equipment.

**CONCLUSIONS:**

Product Science Branch of Antimicrobials Division finds the CSFs for the basic formulation and alternate formulation 1 dated June 17, 2013 and the data for 89101-R to be acceptable, pending submission and acceptance of the joint study for storage stability and corrosion characteristics.